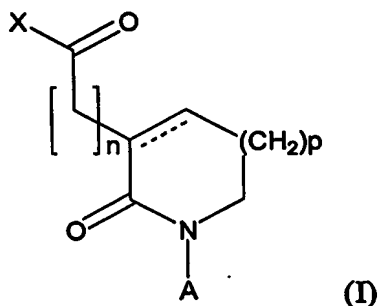


**What is claimed is;**

1. A use of a compound represented by the following general formula (I), and the pharmaceutically acceptable salt or the isomer thereof for the preparation of pharmaceutical composition to treat and prevent cancer diseases:



wherein

10 X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph, or ;

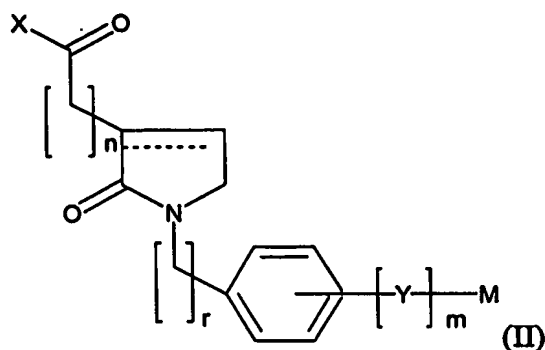
A is an hydrogen, A1 group or (A2),

A1 is a lower alkyl, lower alkenyl, lower alkynyl, lower allyl group having C1 to C5 carbon atoms, a heterocyclic group or aromatic aryl group, preferably, the group selected from thiopenyl group, naphthyl group, pyrrolyl group, furyl group and biphenyl group, wherein the Y in A2 substituted is a lower alkyl group, lower alkoxy group, nitro, halogen, amine, acetamide, carbonamide or sulfonamide group, M is a lower alkyl group or phenyl group substituted with R', of which R' is a hydrogen, lower alkyl or lower alkoxy group, m and r is independently an integer of 1 to 5 respectively;

20 p is an integer of 0, 1 or 2;  
n is an integer of 1 to 5;  
dotted line (≡) means single bond or double bond.

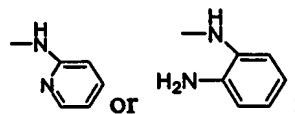
2. A use of a compound represented by the following general formula (II), and the pharmaceutically acceptable salt or the isomer thereof for the preparation of pharmaceutical composition to treat and prevent cancer diseases:

87



wherein

X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph,



Y is a lower alkyl group, lower alkoxy group, nitro, halogen, amine, acetamide, carbonamide or sulfonamide group;

M is a lower alkyl group or phenyl group substituted with R', of which R' is a hydrogen, lower alkyl or lower alkoxy group;

m and r is independently an integer of 1 to 5 respectively;

n is an integer of 1 to 5;

dotted line (≡) means single bond or double bond.

3. The use according to claim 2, wherein said compound is one selected from the group consisting of;

3-[1-(2,4-Dimethoxybenzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-N-hydroxypropionamide,

3-(1-benzyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-N-hydroxy-propionamide,

N-hydroxy-3-(2-oxo-1-phenethyl-2,5-dihydro-1H-pyrrol-3-yl)-propionamide,

N-hydroxy-3-[2-oxo-1-(3-phenyl-propyl)-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[2-oxo-1-(4-phenyl-butyl)-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[1-(2-methyl-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[1-(3-methyl-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[1-(4-methyl-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[1-(2-methoxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-

propionamide,

N-hydroxy-3-[1-(3-methoxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[1-(4-methoxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-

- propionamide,  
 3-[1-(4-bromo-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]- N-hydroxy-  
 propionamide,  
 3-[1-(4-chloro-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]- N-hydroxy-propionamide,  
 5 3-[1-(4-benzyloxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]- N-hydroxy-  
 propionamide,  
 N-hydroxy-3-[1-(4-nitro-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,  
 3-[1-(2,4-dimethoxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-propionic acid,  
 3-(1-benzyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-propionic acid,  
 10 N-{4-[3-(2-hydroxycarbamoyl-ethyl)-2-oxo-2,5-dihydro-pyrrole-1-yl-methyl]-  
 phenyl}-benzamide,  
 N-hydroxy-3-{2-oxo-1-[4-(toluene-4-sulfonylamino)-benzyl]-2,5-dihydro-1H-  
 pyrrol-3-yl}-propionamide,  
 2-(1-benzyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-N-hydroxy-acetamide,  
 15 2-[1-(2,4-dimethoxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-N-hydroxy-  
 acetamide,  
 N-hydroxy-2-(2-oxo-1-phenethyl-2,5-dihydro-1H-pyrrol-3-yl)- acetamide,  
 N-hydroxy-2-[2-oxo-1-(4-phenyl-butyl)-2,5-dihydro-1H-pyrrol-3-yl]- acetamide,  
 2-[1-(4-benzyloxy-benzyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-N-hydroxy-acetamide,  
 20 2-(1-benzyl-2-oxo-pyrrolidin-3-yl)-N-hydroxy-acetamide,  
 2-[1-(2,4-dimethoxy-benzyl)-2-oxo-pyrrolidin-3-yl]-N-hydroxy-acetamide,  
 N-hydroxy-2-(2-oxo-1-phenethyl-pyrrolidin-3-yl)- acetamide,  
 3-{1-[2-(2-fluoro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
 propionamide,  
 25 3-{1-[2-(3-fluoro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
 propionamide,  
 3-{1-[2-(4-fluoro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
 propionamide,  
 N-hydroxy-3-{1-[2-(2-nitro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
 30 propionamide,  
 N-hydroxy-3-{1-[2-(3-nitro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
 propionamide,  
 N-hydroxy-3-{1-[2-(4-nitro-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
 propionamide,  
 35 3-{1-[2-(2-bromo-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
 propionamide,  
 3-{1-[2-(4-bromo-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-

propionamide,

N-hydroxy-3-{1-[2-(2-methoxy-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
propionamide,

N-hydroxy-3-{1-[2-(3-methoxy-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
5 propionamide,

N-hydroxy-3-{1-[2-(4-methoxy-phenyl)-ethyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
propionamide,

N-hydroxy-3-[2-oxo-1-(2-*p*-tolyl-ethyl)-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-{1-[3-(4-methoxy-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
10 propionamide,

N-hydroxy-3-[2-oxo-1-(3-*o*-tolyl-propyl)-2,5-dihydro-1H-pyrrol-3-yl]-propionamide,

N-hydroxy-3-[2-oxo-1-(3-*m*-tolyl-propyl)-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,

N-hydroxy-3-{1-[3-(4-isopropyl-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-  
15 yl]-propionamide,

3-{1-[3-(4-bromo-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
propionamide,

3-{1-[3-(4-chloro-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-N-hydroxy-  
propionamide,

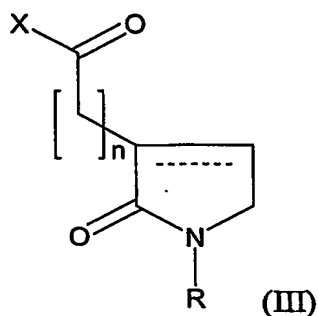
20 N-hydroxy-3-{1-[3-(4-methoxy-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,

N-hydroxy-3-{1-[3-(2-methoxy-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,

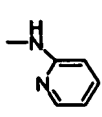
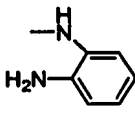
N-hydroxy-3-{1-[3-(3-methoxy-phenyl)-propyl]-2-oxo-2,5-dihydro-1H-pyrrol-3-yl}-  
25 propionamide.

4. A use of a compound represented by the following general formula (III), and  
the pharmaceutically acceptable salt or the isomer thereof for the preparation of  
pharmaceutical composition to treat and prevent cancer diseases:

30



wherein

X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph,  or  ;

R is a lower alkyl, lower alkenyl, lower alkynyl, lower allyl group having C1 to C5  
5 carbon atoms, a heterocyclic group or aromatic aryl group;

n is an integer of 1 to 5;

dotted line (≡) means single bond or double bond.

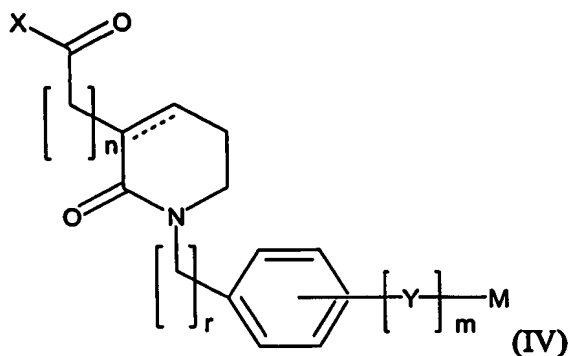
5. The use according to claim 4, wherein said R is the group selected from  
10 thiopenyl group, naphthyl group, pyrrolyl group, furyl group and biphenyl group.

6. The use according to claim 5, wherein said compound is one selected from the  
group consisting of;

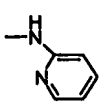
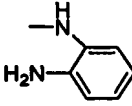
15 N-hydroxy-3-(1-naphthalene-2-ylmethyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-  
propionamide,  
N-hydroxy-3-(1-methyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-propionamide,  
3-(1-allyl-2-oxo-2,5-dihydro-1H-pyrrol-3-yl)-N-hydroxy-propionamide,  
N-hydroxy-3-[1-(2-naphthalene-1-yl-ethyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,  
20 N-hydroxy-3-[1-(2-naphthalene-2-yl-ethyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,  
N-hydroxy-3-[2-oxo-1-(2-thiophen-2-yl-ethyl)-2,5-dihydro-1H-pyrrol-3-yl]-  
propionamide,  
3-[1-(3-biphenyl-4-yl-propyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-yl]-N-hydroxy-  
25 propionamide,  
N-hydroxy-3-[1-(3-naphthalene-2-yl-propyl)-2-oxo-2,5-dihydro-1H-pyrrol-3-  
yl]-propionamide.

7. A use of a compound represented by the following general formula (IV), and  
30 the pharmaceutically acceptable salt or the isomer thereof for the preparation of  
pharmaceutical composition to treat and prevent cancer diseases:

91



wherein

X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph,  or  ;

5 Y is a lower alkyl group, lower alkoxy group, nitro, halogen, amine, acetamide, carbonamide or sulfonamide group;

M is a lower alkyl group or phenyl group substituted with R', of which R' is a hydrogen, lower alkyl or lower alkoxy group;

m and r is independently an integer of 1 to 5 respectively;

10 n is an integer of 1 to 5;

dotted line (≡) means single bond or double bond.

8. The use according to claim 7, wherein said compound is one selected from the group consisting of;

15 3-[1-(2,4-Dimethoxybenzyl)-2-oxo-1,2,5,6-tetrahydropyridine-3-yl]N-hydroxypropionamide,

N-hydroxy-3-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-propionic acid,

N-hydroxy-3-[1-(4-nitro-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-propionamide,

20 3-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-N-hydroxy propionamide,

N-hydroxy-3-[2-oxo-1-(4-phenyl-butyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-propionamide,

N-hydroxy-3-(2-oxo-1-phenethyl-1,2,5,6-tetrahydro-pyridin-3-yl)-propionamide,

25 acid, 3-[1-(2,4-dimethoxybenzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic acid,

3-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-propionic acid,

3-[1-(4-nitro-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic acid,

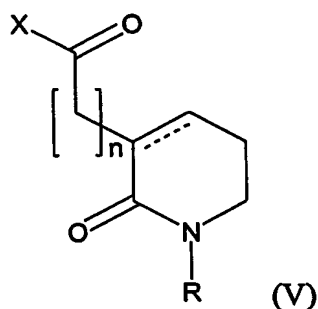
3-[2-oxo-1-(3-phenyl-propyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic acid,

- 3-[2-oxo-1-(4-phenyl-butyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic acid,  
3-(2-oxo-1-phenethyl-1,2,5,6-tetrahydro-pyridin-3-yl)-propionic acid,  
3-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-N-pyridin-2-yl-  
propionamide,  
5 N-(2-amino-phenyl)-3-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-  
propionamide,  
N-(2-amino-phenyl)-3-[1-(2-methyl-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-  
yl]-propionamide,  
N-(2-amino-phenyl)-3-[1-(2-methyl-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-  
10 yl]-propionamide,  
N-benzyloxy-3-(2-oxo-1-phenethyl-1,2,5,6-tetrahydro-pyridin-3-yl)-  
propionamide,  
3-[1-(4-acetylamino-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-N-hydroxy-  
propionamide,  
15 N-4-[5-(2-hydroxycarbamoyl-ethyl)-6-oxo-3,6-dihydro-2-pyridin-1-yl-methyl]-  
phenyl-benzamide,  
N-hydroxy-3-[1-(4-dimethylsulfonylamino-benzyl)-2-oxo-1,2,5,6-tetrahydro-  
pyridin-3-yl]-propionamide,  
N-hydroxy-3-2-oxo-1-[4-(toluene-4-sulfonylamino)-benzyl-1,2,5,6-tetrahydro-  
20 pyridin-3-yl]-propionamide,  
3-[1-(4-acetylamino-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic  
acid,  
3-[1-(4-benzoylamino-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-propionic  
acid,  
25 3-2-oxo-1-[4-(toluene-4-sulfonylamino)-benzyl]-2-oxo-1,2,5,6-tetrahydro-  
pyridin-3-yl]-propionic acid,  
N-hydroxy-3-(2-oxo-1-phenethyl-piperidine-3-yl)-propionamide,  
2-[1-(2,4-dimethoxy-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-N-hydroxy-  
acetamide,  
30 2-(1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-N-hydroxy-acetamide,  
N-hydroxy-2-[1-(4-nitro-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-N-  
hydroxy-acetamide,  
N-hydroxy-2-[2-oxo-1-(3-phenyl-propyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-N-  
hydroxy-acetamide,  
35 N-hydroxy-2-[2-oxo-1-(4-phenyl-butyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-N-  
hydroxy-acetamide,  
[1-(2,4-dimethoxy-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-acetic acid,

- (1-benzyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-acetic acid,  
 (2-oxo-1-phenethyl-1,2,5,6-tetrahydro-pyridin-3-yl)-acetic acid,  
 [2-oxo-1-(3-phenyl-propyl)-1,2,5,6-tetrahydro-pyridin-3-yl)-acetic acid,  
 [2-oxo-1-(4-phenyl-butyl)-1,2,5,6-tetrahydro-pyridin-3-yl)-acetic acid,  
 5 2-[1-(2,4-dimethoxy-benzyl)-2-oxo-piperidine-3-yl]-N-hydroxy-acetamide,  
 (2-oxo-1-phenethyl-piperidine-3-yl)-acetic acid,  
 [2-oxo-1-(3-phenyl-propyl)-piperidine-3-yl]-acetic acid,  
 4-[1-(4-methoxy-benzyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl]-N-hydroxy-  
 butylamide,  
 10 4-(1-phenethyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-N-hydroxy-butylamide,  
 N-hydroxy-4-[2-oxo-1-(3-phenyl-propyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-  
 butylamide,  
 N-hydroxy-4-[2-oxo-1-(3-phenyl-butyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-  
 butylamide.

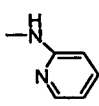
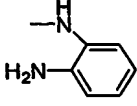
15

9. A use of a compound represented by the following general formula (V), and the pharmaceutically acceptable salt or the isomer thereof for the preparation of pharmaceutical composition to treat and prevent cancer diseases:



20

wherein

X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph,  or  ;

R is a lower alkyl, lower alkenyl, lower alkynyl, lower allyl group having C1 to C5  
 25 carbon atoms, a heterocyclic group or aromatic aryl group, preferably, the group  
 selected from thiopenyl group, naphthyl group, pyrrolyl group, furyl group and biphenyl  
 group;

n is an integer of 1 to 5;

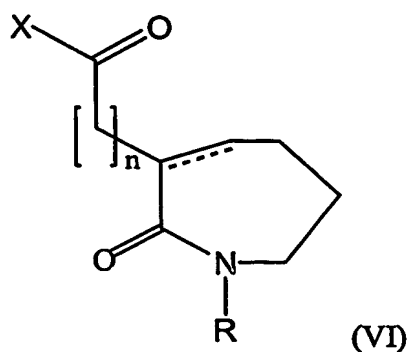
dotted line (—) means single bond or double bond.

10. The use according to claim 9, wherein said compound is one selected from the group consisting of;

- 3-(2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-propionic acid,  
 5 N-Benzyloxy-3-(2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-propionamide,  
 3-(1-Allyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-N-hydroxy-propionamide,  
 N-hydroxy-3-(1-methyl-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-propionamide,  
 N-hydroxy-3-(1-(naphthalene-2-yl-methyl)-2-oxo-1,2,5,6-tetrahydro-pyridin-3-yl)-  
 propionamide,  
 10 N-hydroxy-3-[2-oxo-1-(2-thiophen-2-yl-ethyl)-1,2,5,6-tetrahydro-pyridin-3-yl]-  
 propionamide.

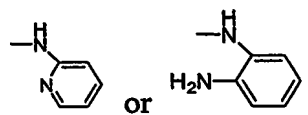
11. A novel compound represented by the following general formula (VI), the pharmaceutically acceptable salt or the isomer thereof:

15



wherein

- 20 X is a hydroxyl group, -NHOH, -NHOCH<sub>2</sub>Ph,



R is independently hydrogen atom, lower alkyl, lower alkenyl, lower alkynyl, lower allyl group having C1 to C4 carbon atoms substituted with a phenyl group which can be substituted with halogen atom or lower alkyl group;

n is an integer of 1 to 5;

- 25 dotted line (—) means single bond or double bond.

12. The compound according to claim 11, wherein said compound is one selected from the group consisting of;

- N-3-(1-benzyl-2-oxo-2,5,6,7-tetrahydro-1H-azepin-3-yl)-N-hydroxy-propionamide,  
N-hydroxy-3-[2-oxo-1-(3-phenyl-ethyl)-2,5,6,7-tetrahydro-1H-azepin-3-yl]-  
propionamide,  
N-hydroxy-3-[2-oxo-1-(3-phenyl-propyl)-2,5,6,7-tetrahydro-1H-azepin-3-yl]-  
5 propionamide,  
N-hydroxy-3-[2-oxo-1-(3-phenyl-butyl)-2,5,6,7-tetrahydro-1H-azepin-3-yl]-  
propionamide.

13. A use of the compound of general formula (VI) as set forth in claim 12 or the  
10 pharmaceutically acceptable salt thereof as an active ingredient in amount effective to  
treat or prevent cancer disease together with pharmaceutically acceptable carriers or  
diluent.

14. The use according to any one of claims 1 to 11 and 13, wherein said cancer  
15 disease comprises lung cancer, bone cancer, pancreatic cancer, skin cancer, cancer of the  
head and neck, cutaneous or intraocular melanoma, uterine cancer, ovarian cancer, rectal  
cancer or cancer of the anal region, stomach cancer, colon cancer, breast cancer,  
gynecologic tumors, Hodgkin's disease, cancer of the esophagus, cancer of the small  
intestine, cancer of the endocrine system, sarcomas of soft tissues, cancer of the urethra,  
20 cancer of the penis, prostate cancer, chronic or acute leukemia, solid tumors of  
childhood, lymphocytic lymphomas, cancer of the bladder, cancer of the kidney or ureter,  
and neoplasms of the central nervous system.